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Restrictive Labor Practices in Seaports

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Restrictive practices may prevent developing country seaports from benefiting from investments in containerization and bulk handling. Port loan appraisals should assess the changes needed in labor arrangements and organization — and estimate compensation payments needed for displaced workers.

This paper — a product of the Transport Division, Infrastructure and Urban Development Department in conjunction with the Infrastructure and Energy Division, Technical Department, Latin America and the Caribbean Regional Office — is part of a Bank-sponsored research project, "Labor Redundancy in the Transportation Sector." Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ann Joseph, room S10-029, extension 33743 (42 pages).

Containerization and modern bulk handling methods can substantially increase ship and labor productivity. Early debate about whether these methods are appropriate for developing countries has largely ended. At least on routes for which one or more partners is a developed country, costs are minimized by modern, productive ships and appropriate port technology.

But, Harding argues, many ports have failed to change their labor practices and to accept the inevitable reduction in their labor force that technological advances call for. Those ports are doubly penalized: by incurring investment costs and continuing to pay labor as if earlier labor-intensive methods still applied.

Harding analyzes productivity-limiting or high-cost practices known generically as "restrictive practices," especially the following: limits on entry to work in the port, an exclusive definition of dock work, job demarcation to prevent interchanging labor, work-sharing requirements within groups that prevent specialization, work-extending practices, restrictive work hours, and restrictions on output.

Harding analyzes how restrictive practices increase shipping costs — by increasing ship turnaround time and direct labor costs and by reducing labor productivity. He also analyzes how employment would be affected if these practices were abolished — or what these

practices are worth in terms of compensation payments to displaced workers.

He gives examples of three approaches to abolishing restrictive practices — gradual, reformist, and drastic. He emphasizes that major changes in restrictive practices are normally associated with changes in a port's cargo-handling organization — by privatization or concession, for example.

The Bank, concludes Harding, must enter the difficult area of labor organization if Bank-funded investments and trade-related projects are to succeed. At appraisal, the Bank should analyze the extent to which changes in labor arrangements may be needed to realize project benefits, and should examine labor organization, collective agreements and other labor arrangements, legal implications, and the investment's impact on the work force.

The cost of compensation payments should be included in the economic and financial evaluation of a project. Efforts involving labor must be seen in the context of a move toward greater private sector participation in port operations. And where privatization is an issue, it is essential to analyze what associated changes in labor organization are implied and what opportunities these might offer to improve working practices.

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Restrictive Labor Practices in Seaports

I. Introduction

1. Ports have been transformed over the past twenty five years in their appearance and in the scale and nature of the equipment that they use by the introduction of bulk handling methods and by containerization. Both of these innovations are capital intensive and have the potential for substantial and indeed dramatic increases in ship and labor productivity.¹ Earlier debate about the appropriateness of these methods for developing countries, where labor is often abundant and possibly low cost, has largely disappeared as a result of experience and of economic analyses of round voyage costs, which demonstrate that at least for those routes where one or more of the partners is in a developed country, overall minimum cost is achieved by the use of modern high productivity ships with appropriate technology in the ports at both ends. The resulting transport system thus includes both high capital cost vessels and capital intensive port terminals, so that intensive working, normally on a 24 hour per day basis, with an increasingly skilled and severely reduced labor force, is essential if overall costs are to be minimized.

2. Nevertheless, many ports have failed to change their manning practices and to accept the inevitable reduction in their labor force, in line with the new conditions (Evans, 1969; Wilson, 1972). In this case the port is doubly penalized, by incurring the cost of the investment in the first place (in many cases with the assistance of a Bank loan) and at the same time, continuing to pay labor in accordance with the higher manning levels appropriate to the previous, labor intensive methods. Not infrequently, the continuation of the previous manning arrangements means also that the benefits of the investment in terms of ship productivity are not fully realized. The pressure to maintain obsolete manning levels comes most directly from the labor affected and indirectly from government, which is reluctant to face the political and financial consequences of major change, in terms of substantial compensation payments at best and the cost of interruptions to the foreign trade of the country at worst.

¹/ ship productivity : tons per day at berth
labor productivity : tons per man per unit of time
cost per ton : $\frac{\text{ship cost per day}}{\text{ship productivity}} + \frac{\text{labor cost per unit of time}}{\text{labor productivity}}$

3. Port unions are traditionally powerful, partly on account of their economic and political strength, partly on account of their ability to impede trade; moreover, by their nature, they are resistant to change. However times are changing and there is now a growing list of ports and countries where unions and employers, usually with encouragement from government, have agreed on a "new deal" for port workers, with enhanced skill levels and greater security for those who remain and with compensation for those who leave the industry, in return for the modernization of working practices. These agreements are inevitably very positive in their effect on the cost of the foreign trade of the country.

4. Manning levels are in general terms defined by the work agreements or the labor agreements of each port. These define conditions of service: hiring and firing, pay and pensions, manning scales, health and safety measures, and methods of work, often supplemented by unwritten agreements known as "customs of the port". Within the work agreements and the customs of the port are to be found the "restrictive practices". These are not defined as such and indeed their identification depends to some extent on the point of view of the observer, whether management or labor. The definition adopted for this review is that restrictive practices are those practices, not themselves necessary for the health or safety of the workforce, which cause an enterprise to operate in a less productive way or at a higher cost than is possible and reasonable. Such practices may originate from government regulations, from management decisions, from labor agreements or from the "custom of the port". Clearly cost is central to any consideration of restrictive practices, whether on the output side as cost per ton handled, or on the input side as cost of labor. Usually cost is affected by the restrictive practice as a derived variable, for example when twelve men have to be allocated to a task that technically requires only ten. However there are other practices where cost enters directly, for instance in the percentage increase in the normal rate that is required for overtime work (where the hours classed as overtime have been defined elsewhere); this is where the borderline between a reasonable or normal practice and a restrictive practice begins to be subjective. For example, extra payment for the evening shift or for night work may be considered "reasonable" and is certainly common, even though it militates against three shift working. The ideal is to have equal payment on all shifts, with a shift rotation in order to achieve equitable treatment for all members of the workforce.

5. Essentially, the point of view adopted here is that cost is the principal though not the only parameter with which to achieve change, as evidenced in such expressions as "to buy the book", that is to pay labor a sum, either a lump sum or an increased hourly or tonnage rate, in return for the freedom for management to fix manning levels, flexibility and so on. Other important factors may include job security, pension rights, medical services and so on. Not all management is responsible and such freedom to fix working practices necessarily implies some checks, provided either by a union, by the existence of effective health and safety

legislation or by the existence of an unbiased appeal procedure (or, more commonly, a combination of these three) and it would be better to talk in terms of buying the old book, to be replaced by a new book that is more appropriate to the new working environment.

6. There are many examples of restrictive practices in port work and a systematic analysis is attempted in chapter III. Well known examples are "spelling" or the "welt"², where gang members alternate, working for two hours then resting for two hours; "continuity", where a gang once formed cannot be modified until its task - usually emptying one hatch on a ship - has been completed, even if the nature of the cargo changes or there are more urgent priorities; "fixed manning", where manning scales are determined irrespective of the nature of the cargo; and "no-transfer", where for example a man classified as a ship-worker can under no circumstances form part of a shore gang. Hours of work are another area of restrictive practices; for example, in the UK until 1967, all work outside the period 8 a.m. - 5 p.m. was classed as overtime, effectively preventing normal two shift working. In another country, work during the two hour lunch break is charged at 175% of the normal rate. These practices typically have a long history and had their own rationale when they were introduced. In most cases they are inappropriate for modern working requirements and are used now as a form of protection against reductions in the work force and as a counter in the bargaining process.

7. This review of the scope and impact of restrictive practices in seaports cargo handling has been prepared as an input to the INUTD research project: "Labor Redundancy in the Transportation Sector". Its objective is to ascertain the extent to which restrictive practices impede the realization of the benefits of investments in port modernization and to provide guidelines for easing this constraint. More specifically, it attempts the following:

- a) to document the origins, extent and most common types of restrictive practices in ports in developing countries;
- b) to identify all of the parties concerned and the extent to which their objectives conflict or coincide;

2/ "Welt" is a dialect word from NW England meaning "rotate" or "revolve", probably of Old Norse origin and known in the region at least since the 14th Century, as in "It was a wenyng vn-war (foolish thought) that welt in his mind", from the poem Patience, as quoted in "Early English Alliterative Poems in the West Midland Dialect", ed Richard Morris, 1864.

- c) to ascertain the extent to which restrictive practices interfere with the efficient use of resources;
- d) to estimate the impact of restrictive practices, and their elimination, on employment;
- e) to identify the most successful approaches to the elimination of such practices in both developing and, to the extent that they are relevant, developed countries;
- f) to assess what related changes in cargo handling organization may be needed to permit the full realization of potential productivity improvements; and
- g) to assess the role of incentives in the achievement of the above objectives.

These topics are covered in more or less detail, depending on the amount of information available.

II. Scope of Enquiry and Nature of Dock Work

8. Ports in developing countries are linked to the ports of the developed world by the ships that carry the trade between them. This means that the work at both ends of the voyage is determined by the same technical requirements, and that there is a ready means of communication between the ports of the developing countries and those of the developed countries. Thus for example the "welt" mentioned in para. 6 above, is known in some ports of the West Coast of South America as the "Liverpool" welt.

9. Ports in developed countries have tended - with many exceptions, both in the developed countries and the developing countries - to be quicker in revising their labor agreements in line with the new technology than have ports in the developing countries, partly because they invested earlier, partly because their labor costs may be relatively higher, partly because there may have been better opportunities for the displaced labor to find alternative work. In no cases has the process been easy and in few cases can it be said to be complete. What we are seeing now is the slow extension of this process to the ports of the developing world, so that the experience of the developed ports can supply useful indications of how (and how not) to tackle the problem of restrictive practices in developing country ports (always excepting from this generalization the famously efficient ports of the Far East, which are more likely to teach the ports of the developed countries than to learn from them).

10. For these reasons it was decided to look at restrictive practices in a range of countries. Visits were made to Venezuela and to Spain: the former because of its notoriety for such practices (now being tackled) and the latter on account of the major changes in the organization of cargo handling that are in process of implementation there. Written contributions were obtained from Peru (Dr. Teofilo Marin Aliaga, formerly member of the Junta Directiva of the Empresa Nacional Portuaria) and from Australia (Captain Colin Wood, Cargo Handling Adviser to the Waterfront Workers Federation). Peru is characteristic of traditional cargo handling organization and practices, while Australia has recently established a Waterfront Industry Reform Authority, to implement an "In-principle" agreement, itself the result of a major enquiry (Inter-State Commission, 1989; Waterfront Industry Reform Authority, 1989). This report includes brief annexes on each of the four above-mentioned countries. Recent data were also collected from Colombia, in the context of the ongoing Port Rehabilitation loan 2635-CO. In addition information has been drawn from the U.K., which has undergone major changes in working practices, and from other countries on a less systematic basis.

11. Dock work is subject to major fluctuations in demand, arising from the seasonality of much of the cargo handled, from the freedom of the shipowner to choose an alternative port and finally from the irregular arrival patterns of the ships themselves, on account of the many uncertainties inherent in sea transport. On account of this fluctuating demand, the industry has traditionally relied on a high proportion of "casual" workers, who are paid when there is work and who receive no pay on the days when there is no work. At the other end of the spectrum are the "permanent" or regular employees, who receive a fixed wage, irrespective of the demand. Between these two extremes there exists a great variety: for example "casuals" with "fall-back" pay for those days when there is no work (or who are guaranteed the equivalent of so many days work each month) and "permanents" who receive a tonnage-related element in their pay. The existence of casuals makes it very difficult to say exactly how many men work in a port: while it is probably better to talk in terms of "man-shifts utilized" care has to be taken in drawing inferences from this figure, on account of the fluctuating work pattern.

12. No doubt the ship's crew was originally employed for the loading and unloading of cargo. At some distant time the owner of the ship (or the owners of the cargo) started to employ (casual) gangs to load and unload the ship, receiving the cargo from its owners, or handling it to them in the case of imports. As ships increased in size and owners increased in number and in distance from the port, the practice arose of constructing sheds adjacent to the quays, to hold cargo in safety, until the owner was ready to take it. Because these sheds were not related to a specific ship, they tended to be provided by specialized companies, not necessarily, and probably rarely, engaged in ship work. Thus the traditional pattern grew up of one group of men working in the loading and unloading of the ship and another group in the work of receiving, delivery and storage on the land.

This separation of the labor was itself a reflection of the existence of different organizations for the two activities: the "ship's agent" on the ship and the "shore handler", in many cases to become the port authority, on land. In some cases, for example Venezuela, the port authority took over all work, on ship and on shore; in other cases the private sector may do both, by concession. The men working on the ship (and their employers) are known as "stevedores" and the men working on the shore as "dockers", at least in British-influenced contexts, though much confusion exists with the terminology. Labor agreements (and restrictive practices) tend to relate separately to each of these groups. Thus in talking of restrictive practices, it is necessary to relate them to the organization of the work, in order to be clear as to their scope. Restrictive practices may exist also within specialist groups such as engineering staff and tally clerks, but these are not considered separately in this document.

III. Findings

Origin and Classification of Restrictive Practices

13. Restrictive practices arose in the first place in response to the perceived need to bring some order to the combination of casual workers and to the variable demand inevitable in dock work. The need was felt by both employers and workers; for instance the "continuity rule" arose initially from the employers' desire to prevent workers from abandoning a poorly paid or difficult cargo when a more attractive cargo arrived. The "welt" started as a way of achieving high output on ships importing frozen meat during the first world war. Other practices were the result of official commissions set up to resolve conflict in the docks. Thus the hours of work in UK ports (para. 6) were fixed in 1920 by the Shaw Commission in the context of post-war recession. The principal written sources of information concerning restrictive practices are the various committees of enquiry that have looked at the organization of dock labor, the labor agreements themselves, chapters in a limited number of United Nations and academic publications and articles and reports of a polemic nature (see especially Baudelaire, 1986; CMD 2734, 1965; International Dockers, nd and Oram, 1975).

14. In many cases the restrictive practices are by "custom of the port" and not incorporated specifically in the labor agreement, so that oral information is an important source. For example the collective agreement for the public ports of Venezuela states (clause ()) that "all those customary conditions or benefits... favorable to the worker... which are not specifically mentioned by the agreement... cannot be modified at any time except by agreement of the two parties."

15. Analysis of the large volume of information collected suggests the following classification of restrictive practices:

16. Limitations on Entry. Dock work is restricted in most countries to those men who are "registered." This practice arose for two reasons: partly to share out the work during the peaks among those who had experienced the lean times, partly to correct the conflicts caused by the older practice of the shipowner contracting with a "gang leader", who was then free to choose the men for the work at his own price. Registration was seen also as a way of raising the level of the casual worker and has been for many years encouraged by the International Labor Organization (ILO). The practice is abused when the registered group uses its position for private profit, for example the practice in Chilean ports before the labor reforms of 1983/84 of the registered worker selling his right for half the wage, "medio pollo", earned by the purchaser (who in his turn could sell his purchased right in similar fashion, "cuarto pollo" (CEPAL, 1989). Many ports have developed two or more registers, in descending order of priority. Registration is naturally a major element in any agreement on reductions in the labor force. Under certain conditions, for instance when there is a high fall-back pay, there may be pressure from the side of labor to register more men. Thus in Venezuela, a casual worker who is hired on 60 consecutive working days has to be taken on to the permanent register. The process of registration implies some administrative unit, especially for casual workers, and in many countries dock labor agencies have been created to maintain the register and to act as intermediary between worker and employer. Examples are the Organization de Trabajos Portuarios (OTM) of Spain, now in process of dissolution (UGT Legislacion, 1988 and Annex 3), the National Dock Labor Board (NDLB) of the UK, now dissolved, and the Asociacion Nacional de Servicios de Estiba (ANSE) of Uruguay. These bodies, by their nature as intermediaries, tend not to be cost conscious and to resist reductions in the labor force, since their influence depends in part on their size.

17. Definition of Dock Work. The concept of registration implies a definition of "dock work". This may either be defined by legislation or within the labor agreement. The question arises commonly as a serious issue in two situations:

- a) when the port for reasons of policy or of shortage, hires equipment to supplement its own equipment. Thus the labor agreement for Buenaventura, Colombia, requires that any such equipment shall be operated by port labor, rather than by the operator of the owner of the equipment. This agreement also includes the requirement that such equipment be maintained in the port workshops: and
- b) in the consideration of who is to do the work of consolidating and emptying containers when this work is done outside the port. Since port labor is usually more highly paid than regular labor, the importer/exporter will normally prefer to use his own labor. In the United States the 50 mile rule applies, so that all work within this distance of the port, which was previously regarded as dock work, continues to be subject to dock labor agreements.

There was a similar rule in the UK, originally proposed as 5 miles from the waterfront though later amended (in the House of Lords) to 0.5 miles. In Buenaventura, work in the free zone adjacent to the port is included within the port labor agreement. Current contract negotiations for US Atlantic & Gulf ports include jurisdictional issues concerning container repair and port related computer work done at inland locations.

18. Job Demarcation. Within the group or groups of registered workers, there may be subgroups, starting from the basic division of ship workers and shore workers and going on to more specialist groups such as winch operators and coal trimmers. There are usually severe limitations on transferability from one subgroup to another and in many cases a total prohibition. The Buenaventura labor agreement for instance defines the minimum number of men that may be on the register for shipwork (940). Thus if there is a shortage of, for example, equipment operators, more men have to be recruited, even if there is a surplus of shipworkers. This lack of flexibility is naturally exacerbated when the different groups work for different employers, who may have different cost structures. For example, shipworkers are employed by a master stevedore who is paid on a per ton basis by the shipowner and so may find it profitable to work at night. The shore gangs and warehouse staff may be paid on a daily basis and, depending on the port tariff, there may be no way for their employer to recover the cost of overtime or of night work. In Port Sudan there was in the mid 1980's the practice of "dumping" when the shipowner, under pressure to leave, would work at night, placing the cargo on the otherwise deserted quay. The shore staff would arrive in the morning faced with the task of sorting out what had been dumped the night before, probably delaying also the start of their regular day work and with obvious security problems.

19. Work Extending. In the days of conventional cargo, in order to maintain working units and in order to reduce the scope for argument, the practice arose of defining minimum (in practice, fixed) gang sizes, possibly with minor variations for different cargoes. The growth of containerized and bulk cargoes has made such minimum gang sizes technically inappropriate, as for instance in the allocation of a gang of say 32 men to each hatch of a container ship, when the only work required is the task of unlashng the containers on arrival and securing them for departure, which might require a gang of at most 12 men. In Puerto Limon, Costa Rica, a minimum of two ship gangs with 32 men each has to be allocated to any ship that is working cargo, including container ships that may be working with only one hatch. Similarly on bulk grain ships, even if worked by mobile pumps, there will be a relatively small requirement for labor, for positioning the pumps and for clearing up. Nevertheless, complete gangs may be allocated to each hatch or, as in Puerto Caldera, Costa Rica, to each pump. Minimum numbers of men may also apply on a per ship basis. In Venezuelan ports, a minimum shore staff of 200 has to be allocated to each ship that is working, irrespective of need. The practice of "spelling" has been already mentioned, as has been the continuity rule (para 6). One effect of the latter, coupled with the minimum gang requirement, was to

make it impossible to redistribute the men working on the different hatches of the same ship in the event of shortages, so that four gangs could be idle, waiting for additional men, even though the men already available would have been sufficient to man three hatches. The advent of multipurpose ships, carrying both containers and conventional cargo, has added a further complication since the two cargoes require different gang sizes. Even so efficient a port as Bremen has (or had) problems in persuading labor to accept modification of the gang size within a shift, when changing from one type of cargo to another.

20. Restrictive Hours. Most labor agreements and port tariffs define the "normal" working hours of the port. For Puerto Cabello, Venezuela, these are 7 a.m. - 11 a.m., 1 p.m. - 5 p.m. and 7 p.m. - 11 p.m. The times in between, if worked, carry a surcharge of 175%. The problem of overtime payments is related to the difficulty of introducing standard two shift working in the context of casual labor. Two shift working implies a certain stability of demand, if the second shift is to be paid at normal rates. The 8am - 5pm p.m. rule in UK ports, referred to earlier (para. 6), turned out to be an impediment to the introduction of two full shifts, when demand increased. The problem of restrictive hours is normally one of cost, so that for example round-the-clock working, to permit the fast turnaround of a container ship becomes, under traditional arrangements, prohibitively expensive. Statements such as, "the port operates on a 24 hour basis", have to be qualified by reference to the cost of achieving this. Weekend work under traditional arrangements is usually at normal rates only for Saturday morning. Thus Sunday work in Venezuela costs double the average of the week plus 17 1/2%. In comparison, in Barcelona, Spain, work outside normal hours carries a 50% surcharge during the week, 75% during normal hours on Sundays and holidays and 100% outside normal hours on these days. This is an area where the distinction between extra payment for work during "unsocial" hours and the requirement for an unreasonable premium, which amounts to a restrictive practice, is a matter for individual judgement (and negotiation).

21. Restrictions on Output. Traditional port incentive schemes are based on an agreed payment for the handling of a determined minimum number of tons per shift. For example, in Barcelona, bales of American cotton have a minimum tonnage rate of 180 t per shift, at a rate of Ps. 33.80 per ton per man (with a specified gang size). Such schemes tend over time to become complex: in the case of bales of cotton, the Barcelona stevedoring tariff identifies 10 different types of cotton, with a total 5 different handling rates and 10 different payments. Their effect on output tends also to be restrictive: on account of the continuity rule, the gang knows that what is not handled one day will be there to be handled the next day, so that there is usually little incentive to go above the minimum tonnage. For this reason the practice of supplementary informal payments is often encountered. A variation on the incentive payment is the "job and finish", where the gang on board ship completes a specified task and then leaves.

This tends to disrupt the smooth flow of cargo, since the men on shore are probably working on a fixed wage per shift. For instance this is the case at Montevideo, Uruguay where the men on board are hired through ANSE and the men on shore through the port authority. Where the tonnage to be handled is not specifically defined, it may well be defined by "custom and practice". The rate of work may also be affected by unnecessary operations; for instance there was for many years in Rotterdam the obligation to weigh all cargo handled overside, even when this was not required by the cargo owner.

22. Work Sharing. With the wide variety of cargo handled in a port, there is inevitably attractive cargo and unattractive cargo. Attractive cargo may pay better and require less effort, whilst unattractive cargoes include dirty and awkward items. In order to give everyone an equal share, the practice in many cases is for the men within a specific group to be rotated, by means of a numbered list. Where a port includes a mixture of general cargo and container berths, unless a special agreement is reached, this means that men may work first on a general cargo ship then on a container ship. This prevents specialization and so hinders productivity.

23. Special Practices. Different ports have their own special arrangements: in Liverpool it was the practice to allow two hours during Sunday work for attending church. In the Venezuela agreement, where two gangs work in the same hatch, each is paid for the total tonnage handled. Many ports have traditionally paid an extra "rest" shift on the basis of the average pay of the week. The labor agreement may include provision for the payment of "premiums", usually one extra month's pay for so many years of service. These arrangements typically affect cost rather more than output and their reasonableness depends on the basic wage.

Parties Concerned in Cargo Handling Operations

24. The commonest forms for the organization of cargo handling at a non-specialized port are summarized as follows:

<u>Landlord functions</u>	<u>Shore handling and shed work</u>	<u>Ship work</u>
a) port authority	port authority	port authority
b) port authority	port authority	stevedores/ships agents
c) port authority	stevedore/ships agents	stevedore/ships agents
d) private company	private company	private company

25. The port authority itself may be a state enterprise, municipal or statutory, though these distinctions do not concern us here. Within this general classification there exist many special arrangements; for instance in the older London berths, the arrangement (b), with the port authority undertaking the shore handling and shed work, was modified under a "quay and shed space agreement", so that functionally it operated as type (c).

The ports of Colombia and Venezuela operate in principle as type (a), with the port authority undertaking all operations, though particularly in Venezuela, the practice is for the private sector ships agents to undertake much of the ship work, as type (b). The most usual traditional arrangement is type (b), where the stevedores/ships' agents undertake the work on board. The arrangement type (c) may operate either on a common user basis, so that different ships' agents may work on the same berth, depending on the ship, or under concession. In the latter case one company, under concession from the port authority, undertakes all work for the contractual period, either one year as in many West African ports of French influence, or on a longer term basis.

26. Two further organizational levels overlay the above basic structure: the first is defined by the arrangements for employing the men who undertake the work. In some cases - and this is the tendency now - each organization employs its own men on a permanent basis. More traditionally, the employer has a relatively small number of permanent staff, employing the rest, according to demand, on a daily or casual basis (Phillips, 1985). In this case the casual labor is often regulated, as described above, by a government sponsored agency, the former NDLB in the case of the UK, the CAINAGOD in France, or the OTP in Spain before recent changes.

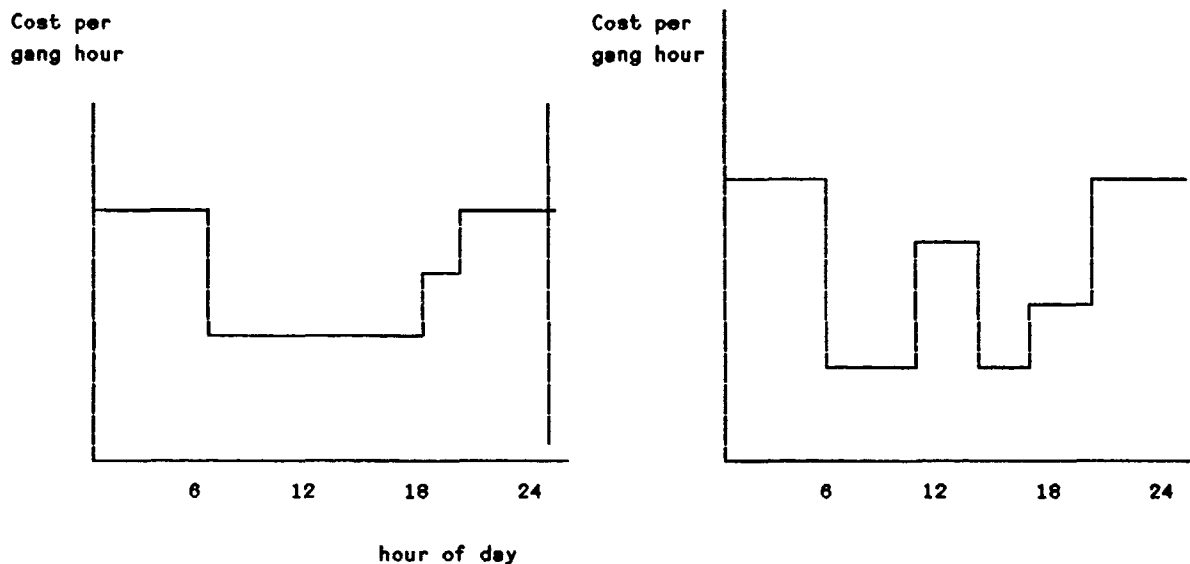
27. The second overlay relates to the union or syndical structure. Traditionally the men who work on board ship belong to one or possibly more unions (in the latter case, according to the type of cargo), whilst the men who work on shore belong to another union. Both unions may belong to some national body or, as in the split of USA West Coast longshoremen into the ILWU-CIO and the ILA-AFL, in 1937, there may more than one national body contending for control (Magden, 1982). The labor agreements will typically be between one group (or union) and the relevant grouping of employers, for example all the ships' agents. From this complexity arises the possibility of non-concurrence of work times and working arrangements. The working hours and practices of other groups, notably the Customs personnel, provide another source of potential impediments to smooth operation. These problems, accepted by years of practice on traditional berths, become of greater significance for container or bulk berths, where lost time assumes a much greater cost.

Impact on the Efficient Use of Resources

28. The costs associated with restrictive practices are primarily those associated with a higher than necessary ship cost, on account of the lost productivity achieved in terms of tons per ship day; those associated with a higher than necessary labor (and mobile equipment) cost per ton, on account of the lower than necessary labor productivity, in terms of tons per man hour; and those directly related to the cost of labor. In extreme cases, the low productivity at a port coupled with a conviction that it can not be improved, has resulted in the provision of alternative facilities in order to get round the problems of the first port, and hence a duplication

of resources. Examples of these are Felixstowe, UK, the general cargo berths at Port Qasim, Pakistan and the port of Ashdod, Israel, reacting respectively against the inefficiencies of London, Karachi and Tel Aviv/Haifa. In 1947 when the NDLB was set up in the UK to regulate (and protect) dock labor, Felixstowe was too small to be included in the scheme. This meant that labor arrangements at the port were not subject to the restrictive practices of the larger ports. This, coupled with energetic and far-sighted management, permitted the port to develop very fast once containerization became of major significance, on account of the port's freedom to adopt efficient working practices, so that it is now the largest UK container port. Port Qasim was originally conceived simply as an iron ore/steel port: later, encouraged by the inefficiencies of Karachi, general cargo berths were developed at Port Qasim. The competition provided by these berths has been the single most important factor in the stimulus of improvements at Karachi. The case of Ashdod is more complex, combining technical and locational features, as well as considerations of efficiency.

29. Low ship productivity (tons per ship day) means that the ship spends longer than necessary working at the berth, hence a higher than necessary cost of ship time at berth. In addition, in the situation where berth capacity is a limitation, the extended length of time spent at the berth may result in an increase in the time ships spend waiting for a berth (ship waiting time). The effect of the low ship productivity is thus felt in the total ship time in port. The restrictive practices that most affect ship productivity are restrictive hours, restrictions on tonnage output and job demarcation. Work sharing (i.e job rotation) may also extend ship time by the impact of less experienced staff on ship productivity. The impact of restrictive hours is probably the most serious: as noted above (para. 20), the restriction is usually expressed in cost terms. Some typical situations are shown in the following graphs:



30. The first graph shows a standard two shift operation with an increasing scale of cost for overtime and night work. The second shows approximately the Venezuelan cost pattern, with a high premium for work during the lunch period. The ship-owner, conscious in less formal terms of the situation presented in these graphs, and knowing the urgency to complete work on his ship, plans his work program accordingly. The decisions of one ship-owner may naturally have implications for the other ships waiting for a berth in the port. The ideal situation, at least for port users, would be one where work in all hours of the day bore the same cost, a situation achieved usually by a pattern of rotating shifts.

31. The restrictive practices that most affect labor and equipment productivity are those concerned with fixed gang size and gang allocation, with restrictions on output and with work sharing, all of which are aspects of work extending, together with some of the varied special practices. Fixed gang sizes arose probably as a mechanism encouraged by the employer, to ensure that sufficient labor was allocated to a hatch and that the work was done expeditiously and in such a way as to preserve the working unit. With the introduction of more specialized forms of cargo packaging, such as bulk grains and packaged timber, the fixed gang sizes became technically inappropriate but by that time established within the labor agreements and subject to change only through negotiation. The introduction of roll on/roll off (Ro/Ro) ships and car carriers provided a fresh challenge for traditional gang sizes and for established job rotation arrangements. With these vessels the need for labor may be highly peaked and, on account of their complicated internal ramps and lifts, is at the same time highly specialized. In addition these ships are more expensive to construct than conventional ships, so that their economic operation depends on fast and economic port handling. There have been years of negotiation in Peru between port labor, the labor regulatory body (which is controlled by the Navy), ENAPU as the port authority and user interests in an effort to create the labor environment that would permit the efficient operation of coastal Ro/Ro vessels for steel movements. A similar problem arose in Puerto Cabello, Venezuela, in the handling of the Ro/Ro vessels from Miami, and was partially resolved by the agreement to pay port labor the standard shift payment, on condition that they did not involve themselves in the physical work of unloading/loading these vessels, thereby doubling the cost of the operation.

32. Spanish ports, following the recent institutional changes, have made a major effort to negotiate specific gang sizes for each different type of cargo, i.e to maintain the concept of a fixed gang size but to make it product specific (see Annex 3). This is in contrast to the approach which attempts to achieve flexibility in the determination of gang sizes.

33. Work sharing arrangements under which all men have an equal opportunity of the best paying jobs - normally the more specialized jobs such as container handling or steel handling - tend to act against high productivity, since these jobs are by definition those where a specialized work force is most necessary.

34. Restrictions on output of the "job and finish" type may, in addition to their impact on ship productivity, also have a negative impact on labor productivity, though this is not so clear-cut. For the men directly involved in the agreement, it may be argued that the tonnage agreed is a "reasonable" figure for a shift's work and that it is a matter of personal choice whether it is done earlier or later in the shift. More serious is the impact such agreements have when a second group of men, not subject to the same agreement, is involved for example in Montevideo, Uruguay, as described above (para. 21).

35. Limitations on job entry and on job demarcation within the registered work force naturally have as one of their objectives the maintenance of a wage level that is higher than would be achieved with unrestricted entry. Port workers, protected by such restrictions, and given the crucial role of ports in the national economy, have tended to achieve a privileged wage level compared with those employed in similar though arguably less arduous jobs in warehousing and other occupations. In recent years there have been several examples where this privileged position has resulted finally in a negative attitude towards the port workers on the part of the general public and - probably more importantly - on the part of the other unions affiliated with the central union organization. This change in attitudes has enabled the employers and government to achieve major changes in port labor arrangements. Such examples are to be found in the UK, in Spain, possibly in Venezuela and maybe, in the future, in Colombia.

36. Systematic estimates do not exist of the overall cost impact of restrictive practices in a given port. Evidence to the Devlin Enquiry in the UK (1965) estimated the cost of the continuity rule alone to be between 8% and 10% of the direct labor cost of unloading (CMD 3104, 1966). The recent Australian enquiry (ref 14 and Annex 1) heard evidence from one company that a 27% saving in direct labor costs could be achieved by removing restrictive practices. This figure is derived from the increased productivity, moderated by the cost necessary to achieve that productivity. Thus the Australian Centre for Transport Policy Analysis estimated in the same enquiry that stevedoring productivity improvements of up to 60% were possible, with direct labor cost savings of nearly 35% (Robinson, 1987).

37. The US West Coast Agreement of 1968, which essentially "bought the book", that is achieved an agreement under which all restrictive practices were in principle abolished, provided for the establishment of a fund of US\$10 million from the employers over a 5 year period, in order to compensate displaced longshoremen. The later East Coast Agreement was rather different in concept in that men continued to draw a wage, although not actually working (or impeding the introduction of new methods, chiefly containerization). More recently (1990) under a new agreement between the AFL-CIO International Longshoremen's Association and the New York Shipping Association, approximately 1500 dockers have been retired and cargo tonnage charges dropped by US\$1 per ton, probably representing a reduction of about 10% of the handling cost.

Impact on Employment

38. In very general terms, the employment in a port may be expressed as:

$$\text{Employment } E = k + a.t_1 + b.t_2 + c.t_3 + d.t_4$$

where k is a fixed number of management and administrative staff, only loosely related to the tonnage handled,

t₁, t₂, t₃ and t₄ are the annual tonnages respectively of general cargo, containerized cargo, dry bulk cargo and liquid bulk cargo.

a, b, c and d are labor productivity indices for each type of cargo.

39. The overall port productivity, expressed in terms of the tonnage handled per employee year, is given by:

$$\frac{t_1 + t_2 + t_3 + t_4}{E}$$

so that overall port productivity is affected both by any increases in the efficiency with which each specific type of cargo is handled and - probably more significantly - by changes in the proportions of the different types of cargo. The subject is worthy of much more detailed attention, but an overall picture can be obtained from the figures given in the ILO report on the impact of new cargo techniques, published in 1986 and with data referring mostly to 1983/4 and to the mid 1970's (Couper, 1986). From the data of that report (and with many qualifications concerning manifest and undetected errors) a graph has been prepared showing changes in overall port productivity between the mid 1970's and the early 1980's, related to the percentage of containerized cargo at the two dates. For ease of study the graph is in two sections (figures 1a and 1b). It will be appreciated that the data of the report did not permit a separate identification of bulk cargoes, so that any changes in their relative tonnage will distort the results. Nevertheless, the overall trend, of increasing productivity related to an increasing proportion of containerization, is clear.

40. In the graphs, a nearly vertical line indicates that increases in productivity have been achieved without a significant increase in the proportion of containerized cargo. This applies to the ports of Inchon, Antwerp, Tai Chung, Port Kelang and Sydney, though it should be noted that there are substantial tonnages of bulk traffics in all these ports, so that the results must be treated with caution.

41. By contrast, a nearly horizontal line indicates that the percentage of containerized traffic increased significantly but without any increase in productivity. These include the ports of Bombay, Colombo and Freetown, among others. The ports of Venezuela actually experienced an

overall decline in productivity despite an increase in the proportion of containerized cargo during the period analyzed. These are data from the mid-1980's and certainly in Bombay and in Venezuelan ports, major efforts are now underway to raise productivity to more acceptable levels. The general tendency is clear: increased containerized traffic results in a very substantial increase in productivity, substantially more than is likely to be taken up by traffic increases. In quantitative terms, an increase of between 10% and 20% in the level of containerization may result in a threefold or fourfold increase in overall productivity. These general results are borne out by the specific results for the UK reported in an earlier report (Galenson, 1989, page 87).

42. Given that the increase in the proportion of containerized cargo and of bulk cargoes, is a world wide and inescapable phenomenon, the reduction of restrictive practices is now largely synonymous with the adaptation of labor practices to these new methods of cargo presentation. The port industry world wide is changing from a labor intensive industry relying on limited mechanization and moderate specialization to a highly mechanized industry with a high degree of specialization and a substantially - and dramatically - reduced labor force. These changes are largely inevitable because of the relative economics of bulk/container compared with conventional ships, which strongly favor the former. The international nature of shipping operations means that high labor costs at one end of the voyage, usually in a developed port, tend to drive change in the port at the developing country end of the route. For example, an analysis of the Papua New Guinea to Australia route showed clearly that overall route economics favored containers, on account of the costly practices in Australian ports, despite the cost pattern of the ports in Papua New Guinea and the inland transport restrictions there. In addition the advantages of multimodal (door to door) transport, which are in practical terms realizable only with containerized or some similar form of transport and handling, favor the new methods. Within the different options open to the developing port for container handling, there will be differing degrees of labor intensity and this should be a factor in their selection. It remains true however that there is no truly labor intensive method of handling a container that is 20 feet long and may weigh up to 25 tons (and still less a 40 foot container).

Approaches to the Elimination of Restrictive Practices

43. Three basically different approaches may be identified in the effort to eliminate restrictive practices:

- a) gradualist: in this approach, the existing labor agreements are modified by negotiation, in the attempt to achieve the progressive elimination of restrictive practices;
- b) reformist: in this approach the existing labor agreements are replaced by a new agreement, which represents a major departure from previous practices; and

- c) drastic: in this approach a radical change is made to the way labor is organized and contracted, with a resulting de facto change in the labor agreements.

44. An example of the gradualist approach is provided by Colombia. Here every two years the "Convencion Colectiva" is renegotiated, first for the Atlantic coast ports (Cartagena, Barranquilla and Santa Marta), then for the Pacific coast port of Buenaventura. Thus for example in the 1989 negotiations for Buenaventura, the management side negotiators were instructed, among other items, to try to achieve a reduction of the restrictive practices affecting container handling, and indeed for the first time a payment based on a per box rate was achieved, where previously the rate paid had depended on the contents of the container.

45. The difficulty with the gradualist approach is that advances in one area may have to be at the expense of giving way in another, so that in the example from Buenaventura, the requirement that equipment be maintained in the port workshops (see para. 17 above) is itself of recent introduction and is aimed at preventing the contracting out of such work. The labor agreement may also have agreed minimum overall numbers. For example, the Buenaventura agreement includes minima of 1316 for ship and shore labor plus 190 winch operators (compared with requirements of 1475 and 220 respectively in the agreement for 1981/1982). The agreement also includes (Articulo 39) a paragraph protecting the employee's position in case of automation (mechanization): "when a port worker suffers a reduction in his income because of the results of the automation of cargo handling, the Employer in agreement with the Union will fix a minimum guaranteed salary, to ensure an adequate payment."

46. Examples of the reformist approach are provided by the US West and East Coast agreements, which effectively replaced earlier agreements and more recently by the in-principle agreement reached in Australia (Waterfront Industry, 1989). This strengthens the bond between worker and employer, requires the employer to negotiate an "enterprise agreement" based on a detailed labor resources plan and improves the terms, including guaranteed pay, that are offered to the supplementary (i.e. non allocated) labor. The lubrication for these changes is provided by the government's agreement to make available A\$154 million (US\$135 million) on a dollar for dollar basis with industry for the early retirement/redundancy package, training and workplace restructuring. The success of such an agreement depends on the ability to involve all employers and all union branches in its implementation, and there have been some signs of resistance (and impatience), mostly from the employers' side, though this is to be expected in so fundamental a change.

47. The best known example of the drastic approach is provided by Chile, which in 1983 by means of law 18032 abolished the "matricula" or right to work in Chilean ports, permitting instead a "free-for-all" situation, in which employers were free to choose whom they wished. About US\$70 million was paid in compensation to those affected. The change is

described in more detail in a recent CEPAL publication (CEPAL, 1989). It is probably unlikely that such an action is reproducible, at least in countries with representative government.

48. The Spanish approach combines elements of the gradualist with relatively drastic organizational changes. Workers previously administered through the OTP have been transferred as employees of new joint government/employer companies (see Annex 3), with whom new contracts are being negotiated. The principal practical effect of the change is that the new companies have to be self financing, so that they are under pressure to negotiate away restrictive practices. This, coupled with the generally competitive environment of Spanish ports, is likely to be a reasonably effective strategy for improving port efficiency in the medium term. In the longer term the proportion of workers permanently allocated to the individual employers, at present around 30%, will increase.

Related Changes in Cargo Handling Organization

49. The increasing specialization of port labor and the sharply reduced numbers required have meant that the previous organization with labor pools, the rotation of work, fixed gang allocations and so on, can no longer be accepted. At the same time, the previous practice of regular working hours with an expensive premium for overtime work is not suitable for high productivity ships, whose time in port may be measured in hours rather than in days. The aim now is to have smaller numbers of more specialized workers, available on a more flexible time basis.

50. Parallel to these changes affecting labor arrangements, the growth of specialized terminals has led to an increase in management specialization either of different operating units within one organization or from the entry of private sector firms. The previous "horizontal" port organization with separate firms working on the ships, on the quays and possibly even in the sheds is giving way to a "vertical" organization, in which work on a berth or group of berths - ship, shore and shed - is concentrated into one management unit.

51. The emergence of these management units, coupled with the need for increased labor specialization, has resulted in a movement away from the casual employment of large numbers of men to the permanent employment of much smaller numbers, allocated to individual employers on a full time basis (with or without a tonnage related element in their pay). This is the process of "decasualization". For the individual employer it means that he has the highly trained labor force that he requires. At the same time it represents an increase in his fixed costs, so that he has every incentive to increase labor productivity and to encourage flexibility between the different tasks on the terminal. The abolition of restrictive practices, the decasualization of labor, compensation payments for redundant labor and the emergence of separate management units, most probably by the entry of the private sector, are all elements in the improvement of port efficiency.

Privatization of Cargo Handling

52. The transfer of cargo handling operations from the port authority or from some other public sector entity, to the private sector, by means of concessions throws into relief the need to reconsider working methods including restrictive practices (Baudelaire, 1989). It is clearly preferable, for the new operators, that they should be free to improve efficiency, though the extent to which this is possible will depend largely on the attitude and influence of the unions involved. In some cases the union representing port authority, employees may be different from that representing the private sector employees; thus the fact of transfer of cargo handling to the private sector implies a transfer from one union to another and in the process the modification of working practices. Where there is a single, strong union, the fact of public or private sector control may have a lesser effect on working practices, at least in the short term. The long history of union resistance to the entry of private sector operators in the new port for Bangkok shows how difficult the change can be. Nevertheless, at the least the transfer should offer the opportunity for a reconsideration of traditional practices. Thus the transfer of the Port Kelang container terminal from the Kelang Port Authority (KPA) to the Kelang Container Terminal Company (KCT) included a series of changes in the labor agreement governing working practices, with a reduction in the work force, limited long term security and promotion linked to performance rather than to seniority; these changes were negotiated in return for higher pay and better conditions (Levy, 1989).

53. The privatization of specific operations may offer a way of eliminating restrictive practices that have been found to be particularly onerous, for example in the case of shed work at the port of Manila, Philippines. This work, done previously by port authority personnel, was subject to various practices that resulted in delay in the delivery of the goods and reduced revenue for the port authority. In 1988 the work was transferred to a private contractor with a revenue linked formula for his payment, apparently with positive results for both port users in terms of better service and for the port authority in terms of increased revenue.

The Role of Incentives in the Achievement of Change

54. There are three parties involved in the process of change in port labor arrangements: port labor itself, the port employers, whether public sector or private sector, and the government. Port labor is typically organized both at the local level and at the national level, as part of the national confederation of labor unions and the interest of the local union and the national confederation may not always coincide, on account of the above average wage level typically enjoyed (at least in the eyes of workers employed in other industries) by port workers. For the port labor, the abolition of restrictive practices and the resulting redundancies represent the surrender of advances that have been achieved over many years of negotiation and struggle. The advantages that they see in the changes are

the future security that is offered, albeit for a reduced workforce, and the possibility of a more regular - and possibly higher - average wage. The process of change has to be lubricated by substantial compensation payments for those displaced.

55. The employers see the advantage of change in increased productivity and hence in higher profits and in a reduction in the uncertainty and strife associated with traditional arrangements. However the same technological factors that require a reduction in the labor force imply also a reduction in the number of employers, on account of the need for substantial investments in new equipment and working capital, and this may represent an inhibiting factor to change. Where the present employer is a port authority, other factors may inhibit change, including political pressures, the mixed objectives of such bodies when engaged in cargo handling operations and possibly a direct interest on the part of the port authority employees in the labor agreements. There may also be legal impediments; for example in Venezuela it is considered that the labor agreement and the port authority (the Instituto Nacional de Puertos) are legally inseparable, so that any major reform of the labor agreement will involve a similarly drastic reform of the authority.

56. The incentives for the government to initiate reform in port labor arrangements are twofold. In part they come from the government's role as guardian of the interests of exporters and importers, for whom an efficient port system is of the greatest importance, especially in the face of surcharges that may be applied by the shipping conferences for port cost, port congestion or port inefficiency. In part they come from the government's desire to minimize the demands for funds that are made upon it by the ports, whether as capital for investment in new works or in some cases as subsidy to cover operating losses. The government may be called upon to make a contribution to the severance pay of redundant labor, possibly with some mechanism for recovering the cost; for example in the Australian case the plan is to finance these compensation payments by means of a per ton levy (Waterfront Industry, 1989, page 20).

IV. Conclusions and Recommendations

The Need for Change

57. Restrictive practices are a major feature of traditional dock work. Their growth over the years was originally in response to the nature of the work and the desire to achieve stability in the face of fluctuating demand. The cost of restrictive practices was tolerable during the period of conventional cargo handling, and a process of gradual change by means of negotiations was adopted in most cases. The benefit associated with a major restructuring of labor agreements was not seen to be worth the cost of such changes.

58. The introduction of bulk and container cargo handling methods has changed the situation. Restrictive practices are no longer aimed primarily at making acceptable the demands of dock work. They are used now much more to protect employment in the face of the substantial productivity increases made possible by the new methods. The cost of restrictive practices has increased sharply on account of the higher costs of specialized berths and ships. There is now a strong economic pressure to achieve greater flexibility in working practice by the removal of the restrictive practices. Associated with this greater flexibility is an inescapable decline in employment.

59. The changes in technology associated with bulk handling and containerization have led to major changes in the organization of work, the organization of labor and in the employer organization. Work previously divided by ship work, quay work and shed work is now organized on a terminal basis. This has facilitated the entry of the private sector into areas traditionally the responsibility of the port authority and has been the incentive for major policy changes on the part of government. Labor, previously organized in a general pool, is now required to be more specialized with a strong trend towards its allocation to individual employers. The traditional pattern of numerous port employers with minimal capital investment, whose main business was to hire labor from the pool as required, is giving way with the emergence of larger and financially more solid groupings, capable of investing in equipment and possibly installations and of offering permanent employment to their workforce.

60. Given the worldwide spread of containerized and bulk transport, no country can afford the luxury of continuing with traditional port labor arrangements and their associated restrictive practices. The cost of their abolition is a major reorganization of the port industry of the country, the payment of substantial sums in compensation and the risk of industrial stoppages, but this cost must be faced if the development of exports and imports is not to be constrained by port inefficiency. The figures available from Australia and elsewhere show that the investment in compensation has a high rate of return, when analyzed in purely financial terms and a very high rate of return, when analyzed in economic terms.

Approaches to Change

61. Changes in restrictive practices have to be made in step with changes in the organization of work. A piecemeal or gradualist approach is unlikely to be able to respond sufficiently quickly to the needs of a changing technology. Typically successful change has come from industry-wide changes, affecting all aspects of work, and a reconsideration of the role of public and private sectors. Privatization usually implies some transfer of responsibility from one union or working group to another and in this process offers the possibility of reform of working practices. Changes themselves have varied according to circumstances but share the characteristics of major changes in labor agreements and in labor organization, a substantial reduction in the labor force and substantial compensation payments.

62. Government participation in the financing of the changes has been necessary in most cases. In addition the achievement of such major changes in the port sector has required the firm determination of government in the face of opposition from entrenched labor and other local interests. The investment in compensation payments has proved to be very cost effective and this will normally be the case provided the changes are irreversible. This need, to ensure irreversibility, is one important reason why institutional changes have to go in step with labor changes.

Role of the Bank

63. Labor organization is a difficult area which for good reasons the Bank has traditionally been reluctant to enter. This hands-off attitude is no longer possible if effective use is to be made of Bank funded investments in port modernization. The appraisal of any prospective loan including infrastructure or equipment elements for bulk and container handling needs a careful analysis of the extent to which present labor practices may impede the achievement of benefits. Such an analysis should include an assessment of the changes required in labor organization and labor arrangements, of legal implications and of the impact on the work force of the proposed investment. The cost of compensation payments should be included in the economic and financial evaluation of the project, together with the project's impact on the total wage bill.

64. Where major changes are required the Bank should encourage joint discussions between the government, public and private sector interests and the unions in order to define new working arrangements and labor practices. Efforts in the area of labor need to be considered in the context of moves towards a greater participation by the private sector in the operation of the ports. Where the privatization of all or part of the cargo handling operation is contemplated, it is essential to analyze what associated changes in labor organization are implied and what opportunities these may offer for the improvement of working practices.

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Reforms in Australian Ports³

Introduction

1. For many years the Australian ports were dominated by the Waterside Workers Federation of Australia (WWF), which had successfully united practically all port labor into a nation-wide union of great power and which moreover was regarded as a pace setter for pay, hours of work, terms and conditions within the Australian union system. The WWF took a leading political role with explicit political objectives and relations between management and union were often antagonistic.

2. With the introduction of new technology to the ports, especially containerization, some changes were inescapable but granted reluctantly and on condition that there was no retrenchment or reduction in the labor force. This has meant that there was, until this year, virtually no recruitment of labor for port work, so that one third of the workforce was over 55 years of age, with a high proportion of men entitled to light work on account of disability.

3. These same changes brought about the need for substantial investment in container related installations and equipment. This has proved an impossible challenge for many of the smaller traditional "labor only" stevedoring companies, which have been forced to amalgamate (or to close) so that at present just two companies dominate the stevedoring industry, with about 85% of all non-bulk work between them. This has led in some ports to a situation where arrangements are agreed between these two employers and the WWF, with an apparent reduction in competition. Working practices in the ports have been a constant source of criticism from port users, amongst whom one of the most vocal has been the agricultural sector, especially the grain exporters, who have complained of the negative effect of overmanning and other practices on their export costs.

The Waterfront Investigation

4. On account of the need to eliminate port-related obstacles to Australia's foreign trade and to achieve reliable, cost-effective transport for exporters and importers, the Federal Government appointed an Inter-State Commission in 1987, whose main task was "to investigate the

3/ This annex is based on material supplied by Captain Colin Wood of Abacus Marine Services, Mackay, Queensland, Australia

efficiency of the handling, storage and movement of cargo through Australian ports and to formulate an integrated plan for waterfront reform". The Commission invited evidence from a large number of witnesses and also contracted a number of investigators to provide the necessary input data for its work. The two volumes of the Commission's Work, published in 1989, contain much valuable detailed information about the restrictive practices that were prevalent in Australian ports, as well as the measures proposed to eliminate them. Two paragraphs are quoted from the report of the Commission (Vol 1, page 54):

"From 1956 labour redundancies were created by the introduction of new technologies, including containerization. This led to the growth of practices that affect the ability of employers to organize work to meet fluctuating day-to-day requirements. These practices include overmanning, rostering restrictions, refusal to transfer to different tasks within shifts, equal placement on tasks, and equality of earnings and idle time.

In an earlier study for the Commission, the Centre for Transport Policy Analysis estimated that an overall stevedoring productivity improvement of up to 60 per cent is possible. This, in turn, implies direct labour cost savings of nearly 35 per cent. Such productivity improvements and more flexible work arrangements would enable stevedoring companies to be more responsive to peaks in labour demand and provide scope for increasing service rates to reduce queuing. James Patrick and Company Pty Ltd gave evidence that a 27 per cent direct labour cost saving could be achieved by removing restrictive work practices alone. This figure is conservative and evidence was received to the effect that efficiency improvements are also possible in other areas."

5. At the same time the Royal Commission into Grain Storage, Handling and Transport contracted the Centre for Transport Policy Analysis of the University of Wollongong NSW to assess the cost impacts of restrictive work and management practices on grain transport and handling. Their valuable report estimates that "the cost penalty that restrictive work and management practices impose on Australian grain exports is approximately A\$1.50 per tonne (US\$1.14). This cost is estimated to be allocated as follows (report pages ii, iii):

"Typically, inefficient work practices within the rail system account for around 25c of this total. Significant areas include excessive manning on some shunting operations, inefficiencies and delays due to train examination procedures, restrictions on the working hours of train crews, and delays in shedding staff made redundant by two-man crewing.

A variety of work practices add perhaps 20c/tonne to the costs within terminals and country terminals. These include overmanning at some sites, absenteeism (Newcastle), job-and-finish (Newcastle), excessive penalty rates for Public Holiday work (Victoria only), half-hour-on half-hour-off by working DPI inspectors (SA), and union attendance during testing of grain for phosphene (Victoria only).

Overmanning on stevedoring typically adds a further 25c, while other inefficient practices within the port - eg needless use of a watchman, excessive payments for mooring - increase costs by 10c.

The remaining 75c is the result of indirect effects: cases where the costs of "production-restricting" practices within one organization affect the costs of another.

Restrictive receival times and discontinuities on receivals add approximately 15c per tonne to the cost of land transport. Interruptions to shiploading, restricted hours of loading and related costs add a further 60c to transport costs.

This last component is both the largest and the most variable. In ports where berth space is in relatively heavy demand - eg Newcastle, Geelong - costs from this source can run as high as \$1.20/tonne. The introduction of continuous working at Newcastle is likely to provide benefits of around \$0.85/tonne; however, industrial disputes and stop-work meetings have, in the last year, added around 50c/tonne to ships' costs at that port.

In ports where capacity is more generously provided - Port Lincoln, Albany, Brisbane - the cost of interruptions to ship-working is much lower, in the region of 20c per tonne.

The difference arises primarily from the amplifying effect that the formation of queues has on any delays to an individual vessel."

Recommendations

6. The Commission produced a detailed Waterfront Industry Plan. The basis of this is the "In-principle Agreement", to be signed between unions, employers and the Federal Government. On the basis of the In-principle Agreement, specific "Enterprise Employment Arrangements" will be introduced at the major ports. The main elements of these agreements are:

- the early retirement of 3000 men and the recruitment of 1000 younger men;
- the transformation of the 1977 General Agreement which regulates dock work into local enterprise agreements;

- a move away from casual employment towards permanent employment, retaining port pools and supplementary labor arrangements according to the specific needs of individual ports;
- the creation of a skill-related career path with appropriate wage relativities;
- training including the retraining of re-allocated men;
- acceptance of the principle that manning for bulk cargo (and in general) shall be "in accordance with real operational requirements"; and
- the creation of the Waterfront Industry Reform Authority to supervise the implementation of the reforms.

7. The total cost of the changes is estimated to be A\$303.9 million (US\$231 million) of which over 95% is represented by the retirement program. Funding is to be provided largely through a statutory tonnage levy of A\$1.25 per ton (US\$0.94) for non-bulk cargo and A\$2.43 per hour (US\$1.85) for bulk cargoes. Direct labor cost savings are estimated to be of the order of A\$100 million per year (US\$76 million) with an aggregate direct saving, including the labor cost saving, of A\$500 million per year (US\$380 million). This excludes "potential indirect cost savings that are related to reliability and service and at least as large as the direct cost savings" (report Vol. 1 P. 165).

Annex 2

Peru: Operational Restrictions at the Port of Callao⁴

Introduction

1. The purpose of this annex is to describe in general terms the present situation in the port as it affects general cargo and the introduction of containerized cargo, also to see the production costs at the terminal as a function of the equipment used, the physical infrastructure and labor productivity in the tasks of cargo handling. The analysis has as its principal focus:

- the identification of those labor practices which prevent a more efficient cargo handling and a better overall profitability for the port;
- the study of the different measures adopted with a view to improve the productivity goals which should exist and the successes (and failures) of these measures.

2. Overall, the port of Callao includes four berths providing space for eight general cargo vessels, one berth for bulk grains with space for three vessels, one berth for bulk minerals and, on the same berth line, room for three vessels with containerized traffic. In addition there are two berths for oil tankers and one berth with accommodation for up to five fishing vessels and for the handling of fishmeal.

3. Shore based equipment includes 30 tractors, 70 fork-lift trucks with capability between 3000 lbs. and 20 ton, 21 mobile cranes with capacity between 3 tons and 30 tons, port locomotives with 20 wagons and finally two yard gantry cranes purchased in 1984 for handling containers. Approximately 50% of all this equipment is considered obsolete for present requirements. Grain handling equipment consist of 2 pneumatic towers of 75 ton capacity and 16 silos with a combined capacity of 23000 ton. There is also a number of portable conveyors for the movement of minerals and bulk fishmeal.

^{4/} This annex was prepared by Dr Teofilo Marin Aliaga, formerly a director of ENAPU and currently a partner of Port Operations Consultants, London and Lima

Labor

4. Three groups of labor are employed in the port of Callao:
- a) personnel of ENAPU;
 - b) personnel employed through the Controlling Commission ("Comision Controladora del Trabajo Maritimo");
 - c) personnel employed by Customs.
5. ENAPU employs 4490 persons in the port, of whom 2040 are engaged in administrative duties and 2450 are in operations. The Controlling Commission, which regulates the employment of casual labor, has responsibility for a total of 1941 persons, made up of:

	<u>Main List</u> <u>("titulares")</u>	<u>supplementary list</u> <u>("suplentes")</u>
ship workers	679	450
winchmen	148	105
tallymen	94	61
trolley-men	85	27
shore men	229	--
Total	1298	643

6. Customs has approximately 700 employees allocated to the work of the port. Thus in summary approximately 7131 persons are directly employed in the work of the port of Callao, with in addition the personnel of the Police, Coastguard, Public Heath, Agriculture and Mining.

7. The men who work on board ship are regulated through the Controlling Commission whilst those who work on the quay and in the sheds are employed by ENAPU. Similarly the tally at shipside is provided by the Commission and in the sheds by ENAPU personnel.

8. The general cargo gang is made up in the following way:

ENAPU:

- 1 foreman, two tallymen
- 1 tractor operator plus 2 assistants
- 1 trolleyman
- 1 shed foreman plus 2 assistants
- 1 fork-lift truck operator

Controlling Commission

- 9 deck men (including 1 foreman)
- 10 stevedores (including 1 foreman) for unloading
- 14 stevedores (including 1 foreman) for loading
- 3 trolley men
- 1 shore-man working with the stevedores
- 5 dockers (including 1 foreman)
- 1 tallyman
- 1 shoreman working with the dockers

9. Thus in total for unloading operations there is assigned a total of 46 persons, whilst for loading operations the total increases to 50, with 11 from ENAPU and 39 from the commission. These are the allocations for the work of one hatch, when more than one hatch is worked, the number of personnel allocated by the Commission increases accordingly, although the number of ENAPU personnel stays the same.

10. For containerized traffic, a reduction in personnel is possible, with an allocation of 5 personnel from ENAPU:

- 1 tallyman
- 1 operator
- 3 shed men (including 1 foreman)

11. The Commission, in the case of containerized cargo, allocates a variable number, between 20 and 24, depending on the ship's equipment; since there is no shore container crane in the port of Callao, all container loading or unloading operations have to be done using ship's gear.

Form of Payment

12. The form of payment for personnel working in the port of Callao depends on the employer. For ENAPU personnel, payment is on a shift basis, with a system of shift incentives and for overtime. Thus on top of the basic wage, there are increases of 40% for the shift incentive, 15% for setting slings, 17.32% for the nature of the work and 6.5% for meal allowance. In addition there are increases for overtime and for additional shifts, equivalent to about 30% of the standard payment. The net result of this is that to the basic payment there has to be added approximately 79.12% for a standard shift and 109.12% for overtime or an additional shift. Both the basic payment and the percentual additions are negotiated in the labor agreements. The basic payment is adjusted every three months in line with the cost of living. In addition 14 additional days are paid each year for public holidays.

13. The personnel allocated by the Commission may be paid in one of two ways:

- a) the shipworkers are paid on the basis of the tonnage handled by the gang and for the type of cargo. For example, for discharging bagged cargo, the gang of 13 stevedores receives US\$5.20 per ton whilst for loading bagged cargo, the gang is composed of 17 stevedores with a payment per gang of US\$5.40. To these costs the following additional payments are included: a fallback payment related to the right to a minimum payment, which is approximately US\$8.30 for an eight-hour shift. For the complete shift there is a mobilization payment of 25% plus US\$2.50 per day for meals. Foremen receive a 75% increase in payment, winch operators receive a 40% increase and those who work in the hold receive 25%. There is thus approximately a total of 165% "extras", loaded on to the basic tariff.
- b) the tallymen, dockmen and those working (for the Commission) on the shore are paid on a daily basis, with the actual payment being made weekly, or every 15 days in the case of the tallymen. The basic wage is US\$2.70 plus a proportion of 1/6 for work on Sundays and holidays, plus 15% for shift change and 8% for extra work, plus 25% for mobilization, US\$2.50 for meals and 8% for family expenses, representing in all an increase between 70% and 75% on the basic wage. There are in addition some minor differences between the payments made for different categories of personnel. These payments are increased on a monthly basis in accordance with the cost of living index.

14. These figures correspond to general cargo. Similar payments are made for bulk cargoes when the operation is done using a mobile conveyor. For containerized cargo, the system of payment is the same as for general cargo, though with the reduced gang size for ship-workers. The other categories of worker receive the same basic wage as for general cargo, plus 60% compensation and 25% meals.

Syndical Organization

15. The port of Callao has one of the strongest syndical organizations in the country, since the Federation of Port and Shipping unions, which was established recently, includes the following syndicates:

- port workers (ENAPU)
- stevedores
- tallymen
- winchmer/dockmen
- shore workers
- merchant navy: officers
- merchant navy: petty officers
- shore personnel (administrative staff) - CPV
- shore personnel (laborers) - CPV
- shipping agents personnel

16. As may be appreciated, the Federation represents a union of both port and shipping workers, since it includes both public and private sectors, especially the shipping companies.

Pension Rights

17. There exist various arrangements for pension rights in the port. The personnel of ENAPU receive their pension directly from that organization, in accordance with law 4916, with some long service personnel who still benefit from the conditions of the earlier Law 19990 for public employees. The difference between the system employed in the port and the normal terms for a public employee resides in the way the basic payment is defined. There are only three entities in the country which enjoy these preferential terms: these are ENAPU, CPV and the Railways. The rest are governed by the normal Social Security law 4916.

18. In the case of personnel employed through the Commission, these enjoy two pensions, one through the law 4916 and the other related to payments made by port users under the "percentages for compensation", which are governed both by law and by the labor agreement, through a subcommittee of the Commission.

Labor Legislation

19. Labor legislation is complex, comprising especially a large number of Ministerial Resolutions and Management Resolutions which have the effect of making problems for its interpretation. Nevertheless, its origin is in Law 9440 of the Commission for Sea Transport and in the regulations of the Port Captaincy and of the Coastguard which, together with the following have the effect of protecting the position of the port worker:

Law 21952 Retirement of the Maritime Worker
Law 23370 Retirement at age 55
Law 23643 Premium for completing 30 years of service
Law 23707 Compensation for services rendered
Law 23861 Daily payment for sickness
Law 23905 Creation of two pensions
Law 24083 Change from laborer to employee
Law 24405 Exemption from the payment of tax on income for employees.

Labor Practices and their Effect

20. Whilst the contractual agreements for the port workers of ENAPU and those of the Commission are quite separate, they are practically identical in terms of working arrangements. The formation of the ship and shore gangs takes place at the same time and they both start work at the same time. However the problem is that the pace of working of the ship gang determines the rate of work for the rest of the operation; in case of a stoppage of work by one group the whole port is paralyzed. The shore gang (with ENAPU personnel) is paid an hourly rate. In this case it is

usually poor equipment maintenance -whether genuine or fabricated- which affects the work of the port. These are the traditional port practices in the face of change. Another aspect is the financial considerations which enter into all aspects of the work, especially of the ENAPU personnel where any benefit received by the workers is received also by those who negotiate the benefit on behalf of the empresa. In particular reference may be made to the two pensions received by the employees of the commission.

21. Entry both to the shipworkers and to the shore workers is restricted and family traditions are strong. New personnel are appointed as part of the political process and as a result ENAPU has become totally bureaucratized, dedicating 90% of its income to wage payments and only 10% to investment and services.

Impact of Containerization

22. The impact of containerization was substantial in that there existed neither the infrastructure nor the equipment necessary. This was the situation in the early years of containerization (1979-1983) and is still the situation in 1989 with the same discussion of the most appropriate type of equipment for ship to shore handling and with just two cranes working in the container yard, which is insufficient. The best that can be said is that something has been done to modernize berths 5 (C-D-E) and to expand the area available for containers. In economic terms, the impact of containerization has been important in the reduction in loss and damage for cargo. The port tariff has been amended for containers but for ship work the effect has been less positive, although with a reduction in the gang size from 35 to 20-40 depending on the type of vessel (whether full-container, Ro/Ro or multipurpose). The resistance to containerization persists, although somewhat reduced, and the inability to substitute or to transfer the labor involved makes it impossible to give a good service to the container vessels or to equip the port in the best way.

23. Comparative average costs in Callao for a general cargo vessel and for a full container vessel are estimated to be:

Comparative Charges to the Ship (US\$ per ton Cargo)

	Conventional Vessel (12000 grt)	Container Vessel (32000 grt)
<u>Cargo handled</u>	<u>1400 ton</u>	<u>4000 ton</u>
1. charges to the ship	12.12	11.97
2. stevedoring cost	3.12	2.12
3. capitania	2.00	1.53
4. tax	0.17	0.16
Total	17.41	15.78
	(on basis of I/11270 = US\$)	

24. This table is based on average productivities of 62.5 ton per gang hour for the conventional vessel and 78.1 ton per hatch hour for the container vessel. This small difference in productivity indicates the inefficient working practices for the full container vessel.

Measures Adopted to Improve Container Handling

25. The principal measures taken include the modification of berth 5(C-D-E) for the exclusive use of container vessels, the expansion and marking of an area adjacent to berth 5 for container stacking and the purchase of specialized container handling equipment, of which the main items are two yard gantry cranes and three top-lifters. A number of institutional and operational changes have been made:

- a) private terminals have been authorized outside the port in order to facilitate the movement of containers. These have their own equipment and Customs offices for the clearance of containerized cargo;
- b) special tariffs for container vessels have been determined and separate tariffs for containers taken by direct delivery and for those that go to the port storage yard;
- c) a high tariff has been applied to empty containers, to encourage their movement out of the port; and
- d) the port syndicates, through their collective agreements, have agreed to a modest reduction in the number of men allocated to container vessels, from 36 to 24. These measures were taken as a result of pressure from port users after a period of chronic congestion in the years 1982-83 from the increased movement of containers.

Effect of the Measures

26. The effect of containerization has been reasonably positive in operational terms: the length of stay of the vessels has been reduced 40% and the storage of goods for sorting and delivery within the port area has been improved. The outside terminals ("dry ports") have permitted a much more rapid movement of the cargo, especially on account of the Customs facility offered.

27. The impact of the changes in terms of port income has been less positive and in particular the revenue from storage has been reduced by the use of the dry ports.

28. Labor has reluctantly agreed to the modest measures taken but has strongly resisted a total mechanization of the port on account of their fear for loss of employment. The revenue aspect is also a cause for concern in that the port of Callao in effect subsidizes the other ports.

29. A number of other factors impede the achievement of the full benefits of containerization including:

- a) the lack of a ship to shore crane for container handling;
- b) the problem of maintenance for the yard equipment, especially the two yard gantry cranes;
- c) the lack of suitably located sheds for those wishing to consolidate/deconsolidate containers within the port;
- d) an absence of focus by management on the reorganization necessary to accommodate containerization;
- e) some relatively minor problems with Customs;
- f) the failure to modernize the working methods in the port (and, to some extent, in the dry ports, since these are mostly staffed by ex-ENAPU personnel).

30. In order to overcome these weaknesses, it is suggested by the author of this annex that:

- a) a detailed analysis of equipment needs should be made in order to prepare a plan for the acquisition of suitable new equipment and for the consequential civil works;
- b) pressure should be applied to achieve a change in thinking on the part of the ENAPU management with respect to containerization. In particular, a Container Unit should be established as a separate division (as has been finally achieved for the divisions of Tugs and Dredging).
- c) a complete revision of the labor agreements should be negotiated with the port and maritime unions, related to the technical need for an enhanced level of mechanization; in order to achieve this, the government should define a special legal instrument exclusively for dealing with the issue of containerization;
- d) all aspects of container control should be included within the computer system of ENAPU.

Changes in Spanish Ports

Spain

1. Up to 1986, port labor was organized, under a paternalist policy, through the Oficina de Trabajo Portuario (OPT) of the Ministry of Labor. The office allocated labor to the cargo handling firms on a daily basis and paid a fall-back when there was no work. This situation proved unsatisfactory on three counts: first, the OPT was not directly concerned with the profitability of cargo operations, so tended to give in to labor's demands, second and related, there was no effective labor discipline. Finally, the fall-back was paid by the state with an open-ended commitment and without any self-controlling cost-driven mechanism on the size of the labor force.

2. In 1986 by law 2/86 (23 May) regulated by law 371/1987 (13 March), new bodies were created in each of the major ports to take over the labor function from the OPT. These new bodies are constituted as Sociedades Estatales (State Corporations), with participation from the public sector (51%) and the private sector (49%). Membership in the sociedad is obligatory for any company that works in the port. The sociedades have to fix their tariffs so as to cover their costs including fall-back pay, so that they have an incentive for efficient operation and it is claimed that successive improvements have been made in the labor agreements, concerning gang size. The first activities of the new sociedades were to compensate by premature retirement a certain number of excess personnel and to authorize the contracting by the individual member companies of a certain number of fixed employees, taken from the casual register, up to a maximum agreed in each port (for example 38% in the case of Bilbao). The following table shows present and proposed gang sizes at the port of Bilbao under the new arrangements.

3. Thus the employers have designated a number of union members as "fijos" or permanent employees, but they do not yet appear to be ready to make the final step to an all permanent labor force, which in any case is strongly resisted by the union, which fears a loss of influence. There are strong differences in working practices between the ports, for example, tonnage (incentive) payments are made at Barcelona but not at Bilbao. Union opposition to the formation of the sociedades has been strong and continues at same ports.

4. There are plans in the Ministry of Public Works for the restructuring of the port sector, to form a type of holding company in Madrid with the individual ports as separate companies. The main motivation for this appears to be to strengthen (central) financial controls and to reduce regional influences on the four autonomous ports.

Port of Bilbao, Spain : Present and Proposed Gang Sizes

	cargo	present manning			proposed by SEED 1/		
		in hold	on deck	on land	in hold	on deck	on land
1.	steel tubes, bars & shapes	3	1	3	2	1	2
	steel plate	4	1	4	2	1	2
	steel plate in packages	2	1	2	2	1	2
	steel slabs (load)	3	1	2	2	1	2
	steel slabs (discharge)	4	1	2	2	1	2
2.	bulks (load)	(one to three)				(zero)	
	bulks (discharge)	(one to three)				(one)	
3.	scrap	(one or two)				(one)	
4.	bulk cement with pipes	(two)				(zero)	
5.	containers (quay cranes)	3	1	3	2	1	2
	containers (gantry cranes)	3	1	1	2	1	0
6.	stuffing/stripping containers	(two)				(two)	
7.	packaged timber	3	1	2	2	1	2
8.	general cargo for loading or unloading including the making up of pallets	7	1	2	3	1	1
9.	palletized general cargo	2	1	2	2	1	1
10.	bales and packs	4	1	2	2	1	2
	cotton	4	1	4	2	1	2
	drums (loading)	4	1	2	2	1	2
	drums (unloading)	4	1	4	2	1	2

11.	cars without driver:						
	unload	4	1	2	2	1	1
	load	4	1	4	2	1	2
12.	bags (complete ship)	10	1	2	6	1	2
13.	big-bags	3	1	2	2	1	2
14.	fish for reefer hatches:						
	on pallets	4	1	3	2	1	1
	dried	10	1	2	6	1	2
15.	fruit in boxes	4	1	4	2	1	2
16.	frozen products (direct)		(four)			(two)	
17.	frozen cargo	10	1	2	6	1	2
18.	paper rolls	2	1	2	2	1	2
	pulp (unitized)	3	1	2	2	1	2
	pulp (bales)	4	1	4	2	1	2
19.	cargo not requiring handling manually	2	1	2	2	1	2
20.	rolls of steel:						
	handled individually	3	1	2	2	1	2
	handled in pairs	4	1	2	2	1	1
21.	explosives:						
	on pallets	3	1	4	2	1	2
	to or from pallets	3	1	12	3	1	2
22.	tallymen : work done under the general tariff will use tallymen from the SEED, when solicited by the owner of the cargo						

1/ SEED : Sociedad Estatal de Estiba y Desestiba

Source: based on information supplied by the Port of Bilbao

Reform in the Public Ports of Venezuela

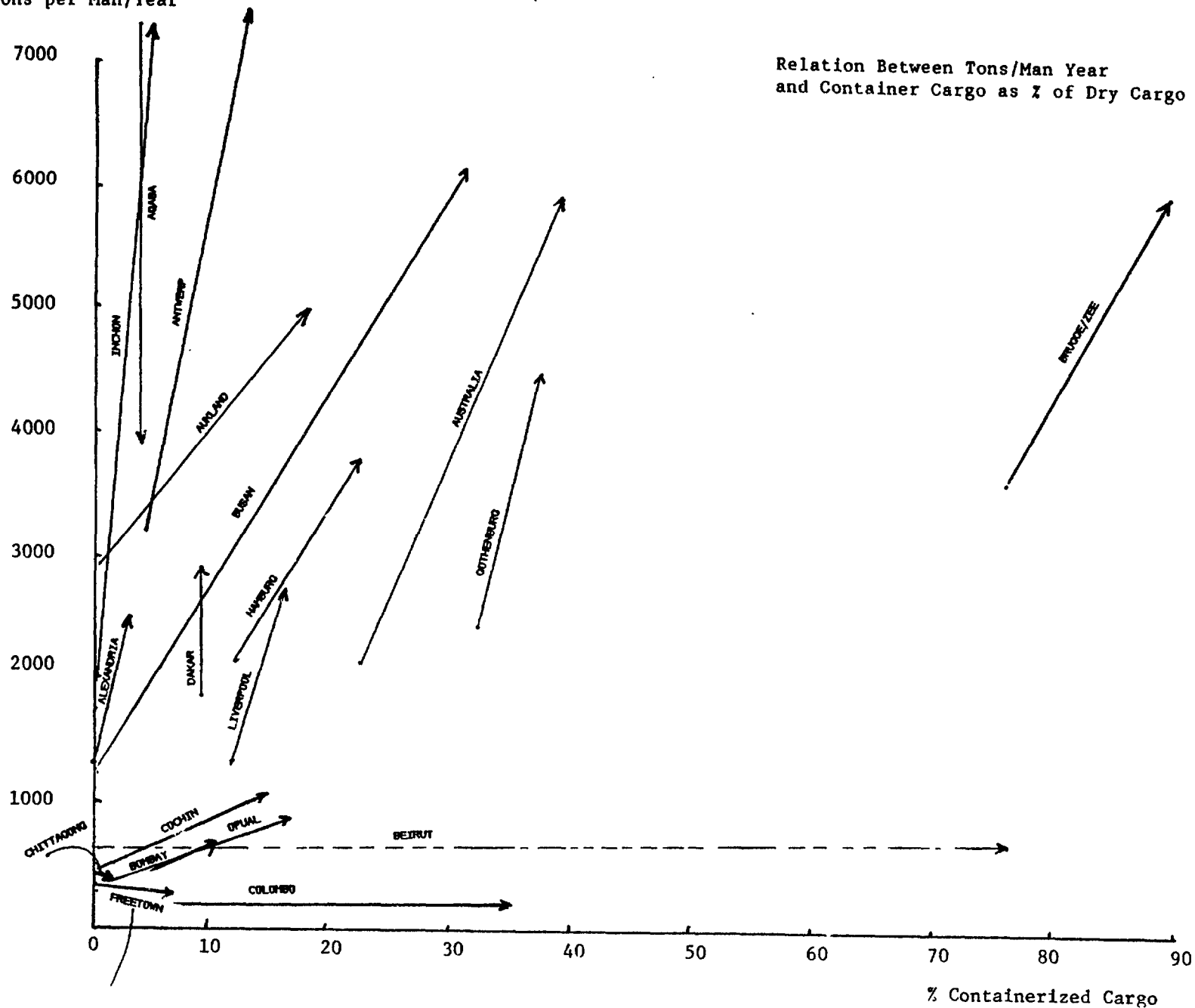
1. In Venezuela the Instituto Nacional de Puertos (INP) is, in principle, responsible for all cargo handling work in the public ports, both on ship and on shore. The INP is a public sector body whose president reports to the Minister of Transport and Communications. This position has resulted from the nationalization of public port activities in 1936, followed by further legislation in 1973 and 1986. The INP labor is well organized and has made numerous advances, particularly in regard to hours of work and minimum manning. Restrictive practices are numerous and the labor agreement is complex and specific in the benefits it agrees. A tonnage payment is made in La Guaira, though in the absence of interport competition for traffic, this is not seen to act as an incentive. Numbers of men employed in the public ports reached a peak of 20,000 in 1979. This followed the appointment of 5000 prior to elections and a further 5000 after the election; the current level is about half the peak figure. Ship productivity (tons per ship day) is low on account of the limited hours worked and labor productivity is very low on account of over manning.

2. The increasing mechanization of port work, coupled with the non availability of the publicly owned equipment has meant that the private sector (ships agents) has increasingly had to bring in its own equipment and men (from a different union) to work on the ships and at times even on the quay. This has involved double payment for the same work, as the INP has to be paid in any event. The private sector has also found it difficult and at times impossible to work continuously: when work is done outside normal hours, the INP labor have to be paid extra and the INP is unable to recover this additional cost in its tariff.

3. Container ships are manned as though they were conventional vessels. Nevertheless some advances have been made with Ro/Ro ships, where a fixed payment is made for the notional INP labor, whilst all work is done by the private sector, and also in the grain silos. Further improvement within the present labor agreements is considered unlikely and the present policy of the private sector, with at least some official backing, is to press for formalization of their role in cargo handling, the partial or complete withdrawal of the INP from this area and for the consequential compensation of these displaced. The central problem facing the INP in implementing change is the labor agreement, whose continuation is legally related to the continued existence of the INP itself. Present thinking is that the only feasible options are either a gradualist approach, attempting to improve the present agreement or a strongly reformist approach, paying off (with substantial compensation) those included in the present labor agreement so that only those needed may then be re-engaged. These options are currently under review by the government.

Tons per Man/Year

Relation Between Tons/Man Year
and Container Cargo as % of Dry Cargo



Source: Couper AD: New Cargo Handling Techniques, etc. ILO 1986

Figure 1A

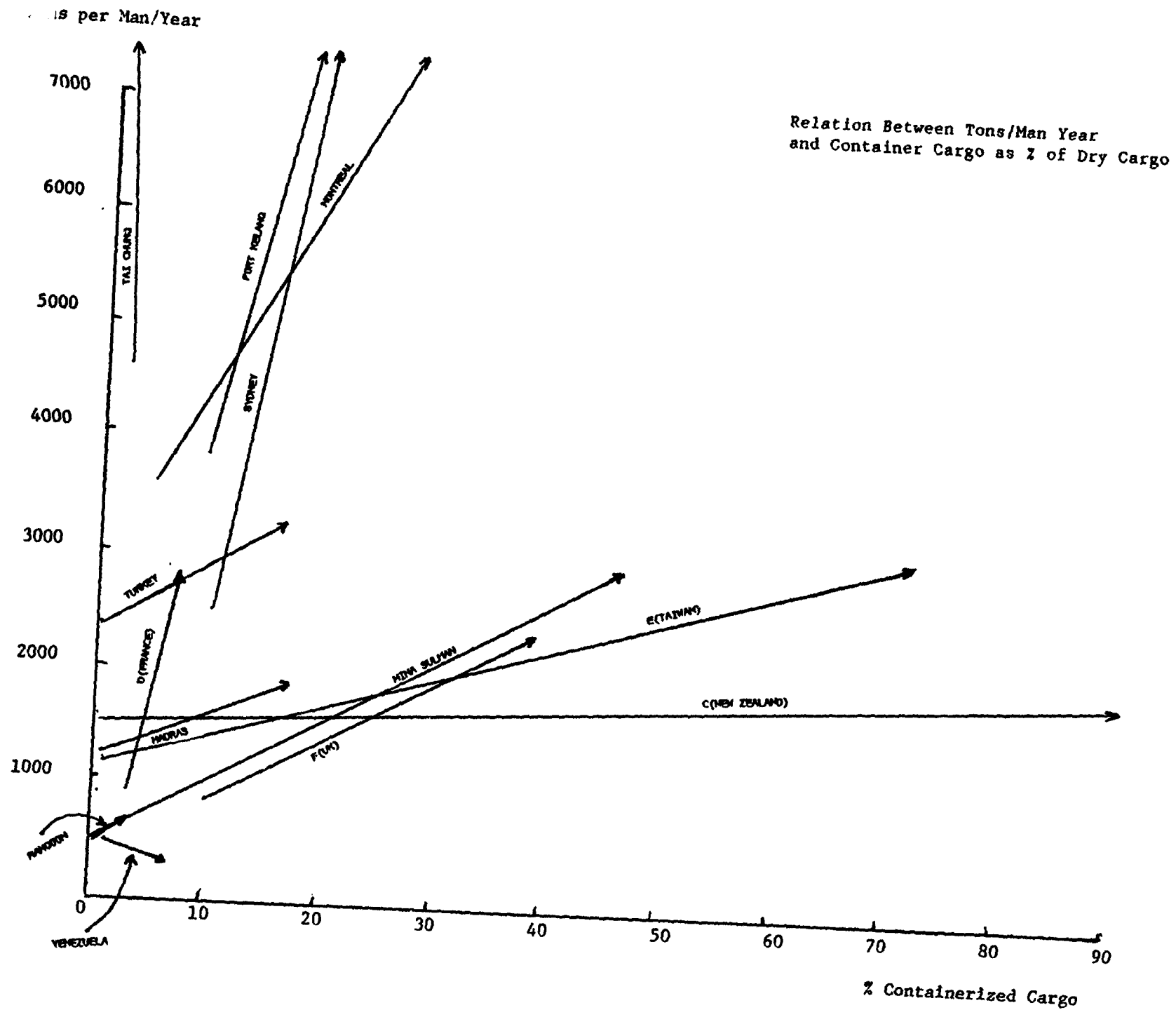


Figure 1B

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